MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE. Assistant Editor: H. H. KIMBALL.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for August, 1903, is based on data from about 3300 stations, classified as follows:

Weather Bureau stations, regular, telegraph and mail, 160; West Indian Service, cable and mail, 8; River and Flood Service, 52, river and rainfall, 177, rainfall only, 62; voluntary observers, domestic and foreign, 2565; total Weather Bureau Service, 2962; Canadian Meteorological Service, by telegraph and mail, 20, by mail only, 13; Meteorological Service of the Azores, by cable, 2; Meteorological Office, London, by cable, 8; Mexican Telegraph Company, by cable, 3; Army Post Hospital reports, 18; United States Life-Saving Service, 9; Southern Pacific Company, 96; Hawaiian Meteorological Service, 75; Jamaica Weather Service, 130; Costa Rican Meteorological Service, 25; The New Panama Canal Company, 5; Central Meteorological Observatory of Mexico, 20 station summaries, also printed daily bulletins and charts, based on simultaneous observations at about 40 stations; Mexican Federal Telegraph Service, printed daily charts, based on about 30 stations.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Territorial Meteorologist, Honolulu, H. I.; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; Lieut. Commander W. H. H. Southerland, Hydrographer, United States Navy; H. Pittier, Director of the Physico-Geographic Institute, San José, Costa Rica; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. M. Shaw, Esq., Secretary, Meteorological Office, London; Rev. Josef Algué, S. J., Director, Philippine Weather Service; and H. H. Cousins, Chemist, in charge of the Jamaica Weather Office.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is 157° 30′, or $10^h\ 30^m$ west of Greenwich. The Costa Rican standard of time is that of San José, $0^h\ 36^m\ 13^s$ slower than seventy-fifth meridian time, corresponding to $5^h\ 36^m$ west of Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local standard is mentioned.

Barometric pressures, whether "station pressures" or "sea-level pressures," are now reduced to standard gravity, so that they express pressure in a standard system of absolute measures.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

THE WEST INDIAN HURRICANE OF AUGUST 8-15, 1903.

The most important tropical storm that has appeared in North American waters since September, 1900, advanced from Barbados, West Indies, over the Caribbean Sea and the Gulf of Mexico from the 8th to the 15th.

The first indication of the presence of this storm to the eastward of Barbados was furnished by the morning telegraphic reports of the 8th. West Indian stations and Gulf and Atlantic coast shipping interests were at once notified that a disturbance probably of dangerous strength was approaching Barbados from the eastward and would move northwestward over the Windward Islands. Thereafter daily until the 14th, West Indian, Gulf, Atlantic stations, and shipping interests were advised of the apparent location and character and the probable course of the storm, and as it passed westward over the Caribbean Sea hurricane warnings were ordered at Gulf and southern Florida stations. The storm increased in strength as it advanced in a north of west course over the Caribbean Sea, and apparently attained its maximum intensity as it approached the Yucatan Channel.

Martinique appears to have been the only island of the Windward Group that suffered serious damage. The vortex of the storm passed over or near that island moving in a northwesterly direction during the night of the 8-9th, unroofing several hundred houses, destroying crops, and damaging a number of sailing vessels.

During the next two days the center of the storm was far distant from any station of observation. Shipping interests and West Indian stations were, however, advised that while reports from that region were missing a disturbance of apparently marked energy was moving north of west over the Caribbean Sea near Santo Domingo. On the morning of the 11th the presence near Jamaica of a storm of great intensity was indicated and advices to that effect were issued with a warning that it was considered dangerous for vessels of all classes to sail for Gulf, Cuban, and South Atlantic ports.

Reports from Kingston, Jamaica, show that the first effects of the storm were felt on that island on the 10th, and that the main hurricane center reached the island on the morning of the 11th, causing a heavy loss of life and property. At Kingston the minimum barometer, 28.80 inches, as indicated by the barograph, occurred at 5:30 a. m. of the 11th, and at 6:15 a. m. the barometer had risen to 29.36 inches. The anemometer cups were disabled, but the maximum wind velocity at Kingston was estimated at 65 miles an hour. The principal sufferers were the owners of banana plantations whose losses were estimated at more than £500,000. The orange, pimento, and coffee crops suffered severely; the towns of Port Antonio and Port Maria were almost destroyed, and throughout the parishes of St. Mary, Portland, St. Andrew, St. Catherine, and St. Thomas the destruction to houses, property, and plantations was appalling. Kingston, with the exception of damage to houses and warehouses on the sea front, suffered less than any other place on the island.